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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/665,508

Applicant(s)

BETGE-BREZETZ ET AL.

Examiner

DOHM CHANKONG

Art Unit

2152

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to Applicant's request for continued examination. Claims 1, 5, 9, 15, 17, and 19 are amended. Claims 1-19 are presented for further examination.
2. This action is a non-final rejection.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5.18.2008 has been entered.

Response to Arguments

4. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection necessitated by Applicant's amendment. As to claims 2 and 14, the previous rejection relied on applicant's admitted prior art to teach complementary third data comprises market research. Applicant asserts that the specification does not admit paragraph 0005 to be prior art. The prior art admission is implied from Applicant's recitation of that using market research to estimate how customer requirements are evolving and to deduce how the network should evolve was a proposed solution to the problem that Applicant's

invention attempts to solve. A recitation that a feature has been a proposed solution clearly implies that the feature is prior art.

Furthermore, paragraph 0008 recites that “most prior art solutions propose network planning as a function of the evolution of network parameters, but without taking account of service usage and/or subscription evolution.” And paragraph 0009 recites that the “an object of the invention is to remedy some or all of the problems previously cited.” Thus, when read in context with these paragraphs, it is reasonable to infer that the subject matter contained in paragraph 0005 is directed to a prior art solution.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 1 recites, *inter alia*, a proposal that “defines each item of a plant to be modified or replaced [and] its precise location.” It is unclear which claim element's precise location is being defined in the proposal. Applicant should clarify whether “it” is referring to the item of the plant of the plant itself.

b. Claim 5 is rejected for lacking proper antecedent basis: “said third data.” Claim 5 depends on claim 1. Neither claim 1 or 5 provide the antecedent basis for “third data.”

c. Claim 8 is also rejected for lacking proper antecedent basis: “said third data.”

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 are rejected under 35 U.S.C. §103(a) as being unpatentable over Gopalan et al, U.S. Patent Publication No. 2003|0208523 [“Gopalan”], in view of McKinnon, III et al, U.S. Patent No. 7,299,284 [“McKinnon”].

7. As to claim 1, Gopalan discloses a system for processing configuration data of a communication network, comprising:

a first calculation module [Figure A «item 10»], including:

an extraction module that generates usage profiles for each of a plurality of service level agreements (SLAs) [Figure A | 0008 where : Gopalan's past and present usage pattern data reads on Applicant's usage profile | Figure B3 and 0168 : Gopalan discloses calculating a usage pattern for each SLA to determine whether they are critical],
and

an aggregation module that receives and aggregates said usage profiles for each of said SLAs [0095] and accordingly determines a network usage predictive state comprising an SLA usage profile to be used for prediction from first data representative

of usage of resources and/or services within said network [Figure A «item 500» | 0010 - forecasting future usage patterns from past and current usage pattern trends]; and wherein said first calculation module is adapted to determine said usage profiles of said service level agreements between an operator of the network and customers from said first data and from said service level agreements [0024, 0071, 0168: using the historical data, usage pattern for trend analysis of each SLA].

Gopalan does not expressly disclose the feature of a second calculation module adapted to determine a network evolution planning proposal which defines each item of a plant to be modified or replaced, its precise location, and a favorable time to modify or replace said plant from said usage predictive state and second data representative of a plant of said network. However, this feature was well known in the art at the time of Applicant's invention. For example, McKinnon discloses such a feature in his invention directed towards a system for allocating bandwidth according to a user's SLA.

Like Gopalan, McKinnon discloses features directed towards determining a predictive state from usage profiles for a plurality of SLAs [column 11 «lines 24-29»]. And also like Gopalan, McKinnon discloses determining whether the predicted or forecasted state exceeds a certain threshold [column 18 «line 65» to column 19 «line 2»]. However, McKinnon improves upon the process by adding a second calculation module adapted to determine a network evolution planning proposal [column 19 «lines 3-31»: McKinnon discloses sending a proposed modification to the user. This proposed modification reads on Applicant's planning proposal] which defines each item of a plant to be modified or replaced, its precise location, and a favorable time to modify or replace said plant [column 19 «lines 18-34»: McKinnon discloses

that the proposed changes specify the item to be modified (bandwidth), its location (bandwidth allocator specifies the user), and the time to modify the bandwidth], from said usage predictive state and second data representative of a plant of said network [column 18 «lines 53-65»].

It would have been obvious to one of ordinary skill in the art to have modified Gopalan's predictive SLA monitoring system to include McKinnon's planning proposal feature as discussed above. McKinnon discloses that a benefit of such a feature includes the ability to dynamically adapt network allocations to various plants and SLAs based on forecasted usage which provides a user with a more enriching web experience [column 19 «lines 36-38»].

8. As to claim 3, Gopalan as modified by McKinnon discloses said first calculation module is adapted to determine a service level agreement usage profile for each service level agreement [0168: determining a usage pattern for each SLA].

9. As to claim 4, Gopalan as modified by McKinnon discloses said first calculation module adapted to determine a service level agreement usage predictive profile constituting said network usage predictive state from said service level agreement usage profiles [Figure A «item 500» | 0008, 0010: Gopalan forecasts future usage patterns based on past and current data].

10. As to claim 5, Gopalan as modified by McKinnon discloses the first calculation module is adapted to determine a service level agreement usage predictive profile comparing said network usage predictive state from said service level agreement usage profiles [0142: comparing actual values with predicted values]; and wherein said service level agreement usage

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predictive profile is determined from said third data and said service level agreement usage profiles [Figure B3 | 0030, 0133: trend analysis of the SLAs].

11. As to claim 6, Gopalan as modified by McKinnon discloses said first data is chosen from a group comprising the current usage of resources and/or service of the network and at least a portion of the record of usage of the resources and/or service of said network [0008: past and present usage].

12. As to claim 7, Gopalan as modified by McKinnon discloses that said first calculation module is adapted to determine said service level agreement usage profiles by trend evolution analysis [0168, 0181].

13. As to claim 8, Gopalan as modified by McKinnon discloses that said third data is chosen in a group comprising the future types of service level agreements and future evolution of service subscriptions [0022].

14. As to claims 16 and 17, as they do not teach or further define over previously claimed limitations, they are similarly rejected for at least the same reasons set forth for claim 1.

15. As to claim 18, as it does not teach or further define over previously claimed limitations, it is similarly rejected for at least the same reasons set forth for claim 2.

16. As to claim 19, Gopalan as modified by McKinnon discloses a management system wherein said network is chosen from at least one of Internet, MPLS, ATM and Frame Relay networks [0002].

17. Claim 2 is rejected under 35 U.S.C §103(a) as being unpatentable over Gopalan and McKinnon, in view of Applicant's admitted prior art ["admitted art"].

18. As to claim 2, Gopalan as modified by McKinnon discloses said first calculation module is adapted to determine said network usage predictive state from complementary third data representative of user requirement prediction information [0010] but does not expressly disclose that the complementary third data comprises market research.

However, in the specification, Applicant admits that such the use of market research as data to determine network usage was well known in the art at the time of Applicant's invention [Applicant's patent publication 2005|00177629, paragraph 0005]. It would have been obvious to one of ordinary skill in the art to have modified Gopalan's predictive system to include market research. The addition of market research as a parameter in Gopalan's calculations would enhance the reliability of the predicted network usage.

19. Claims 9-13 and 15 are rejected under 35 U.S.C §103(a) as being unpatentable over Gopalan as modified by McKinnon, in view of Lewis et al, U.S Patent No. 6,421,719 ["Lewis"].

20. As to claims 9 and 13, Gopalan as modified by McKinnon does not expressly disclose the feature of a traffic engineering module adapted to determine an optimum configuration of the network from said second data describing the plant of said network and a usage predictive state and predictive state validation module that supplies said traffic engineering module with said network usage predictive state delivered by said first calculation module and upon receiving an optimum configuration associated with said predictive state from said traffic engineering module, determines whether said network can support said optimum configuration and when said optimum configuration cannot be supported, determines a network plant that is inadequate for future resource and/or service requirements, by an evolution of the network corresponding to said network usage predictive state. However, such a feature was well known in the art at the time of Applicant's invention.

For example, Lewis discloses such a feature in his invention directed towards configuring managed network objects in a reactive or deliberative manner. Specifically, Lewis discloses a traffic engineering module adapted to determine an optimum configuration of the network from said second data describing the plant of said network and a usage predictive state [column 13 «lines 16-20»] and a predictive state validation module that supplies said traffic engineering module with said network usage predictive state delivered by said first calculation module [column 14 «lines 35-40»] and upon receiving an optimum configuration associated with said predictive state from said traffic engineering module, determines whether said network can support said optimum configuration [column 3 «line 62» to column 4 «line 3»]; Lewis discloses testing the configuration on the network and verifying whether the network performance has actually improved] and when said optimum configuration cannot be supported, determines a

network plant that is inadequate for future resource and/or service requirements [column 3 «lines 33-53»], by an evolution of the network corresponding to said network usage predictive state.

Lewis does disclose determining whether a network can support the optimum configuration [column 2 «lines 36-45»] and if a network cannot, determines whether a network plant is inadequate for service requirements [column 3 «lines 34-43»] : Lewis discloses determining a capacity of the network | column 3 «line 62» to column 4 «line 3». The determination of whether a network plant is inadequate for service requirements is subsumed in the determination of whether a network can support a optimum configuration. In other words, in determining whether a network can support a optimum configuration, Lewis discloses determining whether the network plant has adequate requirements to handle the configuration.

It would have been obvious to one of ordinary skill in the art to incorporate Lewis' teachings of verifying optimized configurations at network devices to insure that they are operating properly into Gopalan as modified by McKinnon's network management system. Such a feature improves Gopalan as modified by McKinnon because it enables an operator to verify that configuration commands had been performed by the device and to determine whether the improvement of the device has actually improved.

21. As to claim 10, Gopalan as modified by McKinnon discloses said second calculation module includes a planning determination module connected to a planning database and adapted to determine said planning proposal from the designation of the network plant that can be disturbed, and said planning data from said database [0080:–Gopalan discloses a database that

contains "information related to the various configurable entities." These configurable entities read on network plants that can be disturbed].

22. As to claim 11, Gopalan as modified by McKinnon does not expressly disclose that said planning determination module is adapted to deliver said planning proposal minimizing the costs of network evolution. However, such a feature was well known in the art at the time of Applicant's invention. For example, Lewis discloses a module adapted to deliver said planning proposal minimizing the costs of network evolution [column 9 «lines 30-55»: Lewis discloses providing short-term and long-term proposals for evolving the network. The short-term proposal minimizes the costs of the evolution].

It would have been obvious to one of ordinary skill in the art to have modified Gopalan to include Lewis' minimization feature. Lewis discloses that short-term solutions that minimize the costs of network evolution works more quickly than other types of solutions. Thus, one of ordinary skill in the art would have been motivated to include such proposed solutions into Gopalan to provide a means for delivering solutions that will more efficiently evolve the network.

23. As to claim 12, Gopalan as modified by McKinnon discloses that at least some of said planning data takes the form of planning rules [see McKinnon, column 19 «lines 27-38»].

24. As to claim 15, Gopalan as modified by McKinnon does not disclose a GUI. It should be noted however that the claim language "adapted to enable the definition of said third data...and

the display of each planning proposal” and “to enable an operator to monitor the validation of planning proposals” does not limit the claim’s scope because this language is merely directed towards the intended use of the GUI. See MPEP §2111.04. Only those claim elements that affect the *structure* of the claimed invention are given patentable weight. As long as a prior art reference teaches a GUI, definition of the third data, a planning proposal and validation of planning proposals, it is capable of the functionality of displaying those features as claimed by applicant.

Lewis discloses a GUI adapted to enable the definition of third data by an operator and the display of a planning proposal, wherein said GUI is adapted to enable an operator to monitor the validation of planning proposals [Figure 1B | column 5 «lines 10-19» | column 6 «lines 5-24»]. It would have been obvious to one of ordinary skill in the art to have incorporate Lewis’s GUI functionality into Gopalan’s network management system. One would have been motivated to make such a combination to improve Gopalan by providing an interface to define and view network information as taught by Lewis.

25. Claim 14 is rejected under 35 U.S.C §103(a) as being unpatentable over Gopalan and McKinnon, in view of Mangipudi et al, U.S Patent No. 7.058.704 [“Mangipudi”], in further view of admitted art.

26. As to claim 14, Gopalan and McKinnon does not expressly disclose a graphical user interface. However, GUIs are quite ubiquitous in the art. For example, Mangipudi discloses a GUI that permits an operator input a definition of complementary third data representative of

user requirement prediction information and generates a display of each planning proposal [column 8 «lines 11-42»]. It would have been obvious to one of ordinary skill in the art to have incorporate Mangipudi's GUI functionality into Gopalan's network management system. One would have been motivated to make such a combination to improve Gopalan by providing an interface to define and view network information as taught by Mangipudi.

Gopalan, McKinnon, and Mangipudi do not disclose that complementary third data comprises market research. However, see the rejection of claim 2 for combination rationale. It would have been obvious to one of ordinary skill in the art to incorporated market research into Gopalan, McKinnon and Mangipudi's GUI system to increase the reliability of Gopalan's predictive system.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Tunncliffe et al, U.S. Patent No. 6.272.110;

Hayball et al, U.S. Patent No. 6.308.174;

Jannarone et al, U.S. Patent No. 7.127.439.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOHM CHANKONG whose telephone number is (571)272-3942. The examiner can normally be reached on Monday-Friday [8:30 AM to 4:30 PM].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571.272.3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dohm Chankong/
Examiner, Art Unit 2152